

WHAT IS CLAIMED IS:

1. An apparatus for applying an OFF-state stress to a P-MOS device of a liquid crystal display (LCD) device, comprising:
 - a power supply unit for supplying a source power;
 - a panel loading unit including a plurality of panel jigs on which one of the array substrate and an LCD panel is loaded;
 - a voltage control unit including a plurality of voltage control channels and modulating a voltage of the source power;
 - a frequency control unit including a plurality of frequency control channels and modulating a frequency of the source power;
 - a time setting unit for controlling a time period of supplying the source power; and
 - a panel selecting unit including a plurality of panel selecting channels and modulating an application of the source power.
2. The apparatus according to claim 1, further comprising a backlight selecting unit for modulating an application of a backlight source power to the panel loading unit.
3. The apparatus according to claim 1, wherein each of the array substrate and the LCD panel includes a gate pad connected to a gate line, a data pad connected to a data line and a common pad connected to a common line and a common electrode.
4. The apparatus according to claim 3, wherein the source power includes a gate voltage, a data voltage and a common voltage.

5. The apparatus according to claim 4, wherein each of the panel jigs has a plurality of power input terminals applying the source power to one of the array substrate and the LCD panel loaded thereon.

6. The apparatus according to claim 5, wherein the plurality of power input terminals include first, second, and third power input terminals, wherein the first power input terminal applies the gate voltage to the gate pad, wherein the second power input terminal applies the data voltage to the data pad, wherein the third power input terminal applies the common voltage to the common pad.

7. The apparatus according to claim 4, wherein the plurality of voltage control channels include a gate voltage control channel for modulating the gate voltage, a data voltage control channel modulating the data voltage, a common voltage control channel for modulating the common voltage and a data terminal ground channel for grounding the data pad.

8. The apparatus according to claim 4, wherein the plurality of frequency control channels include a gate frequency control channel for modulating a frequency of the gate voltage, a data frequency control channel for modulating a frequency of the data voltage, a common frequency control channel for modulating a frequency of the common voltage.

9. The apparatus according to claim 4, wherein said frequency control unit adds an AC voltage to the voltage-modulated source power.

10. A method for applying an OFF-state stress to a P-MOS device of a liquid crystal display (LCD) device, comprising:

loading a plurality of array substrates for an LCD device into a plurality of jigs, each of said array substrates having a gate line, a data line, and a common line;

applying a source power from a power supply unit to the gate line, data line, and common line of a plurality of the array substrates loaded into the jigs;

modulating the source power voltage of the gate line, data line, and common line of each of the plurality of array substrates via a voltage control unit; and

modulating the frequency of an AC voltage component of the voltage-modulated source power via a frequency control unit.

11. The method of claim 10, wherein at least one of said array substrates for an LCD device is housed in an LCD panel.

12. The method of claim 10, wherein an OFF-state stress is applied simultaneously to a plurality of the array substrates loaded into the jigs.

13. The method of claim 10, wherein
said voltage control unit includes gate, data, and common voltage control channels;
and
wherein modulating the source power voltage of the gate line, data line, and common line comprises:
modulating the source power voltage of the gate line via the gate voltage control channel;

modulating the source power voltage of the data line via the data voltage control channel; and

modulating the source power voltage of the common line via the common voltage control channel.

14. The method of claim 10, wherein
said frequency control unit includes gate, data, and common frequency control channels; and

wherein modulating the frequency of an AC voltage component of the voltage-modulated source power comprises:

modulating the frequency of the AC voltage of the gate line via the gate frequency control channel;

modulating the frequency of the AC voltage of the data line via the data frequency control channel; and

modulating the frequency of the AC voltage of the common line via the common frequency control channel.

15. A method of manufacturing liquid crystal display (LCD) panels comprising:
simultaneously applying an OFF-state stress using an AC voltage to at least one thin-film transistor (TFT) of each of a plurality of LCD panels.

16. A liquid crystal display (LCD) device loading unit comprises:
at least one panel jig for holding a LCD device, said LCD having a gate pad, data pad, common pad, and at least one P-MOS device;

said panel jig including first, second and third power input terminals;

said first power input terminal corresponding to said gate pad, said second power input terminal corresponding to said data pad, and said third power input terminal corresponding to said common pad;

said first, second, and third power input terminals contacting said gate, data, and common pads, respectively, when said LCD device is loaded into said panel jig; and

said panel jig supplying an OFF-state stress to said P-MOS device of said LCD device via said first, second, and third power input terminals and said gate, data, and common pads.

17. The liquid crystal display (LCD) device loading unit of claim 16 further comprising:

a plurality of said panel jigs, each of said panel jigs having first, second, and third power input terminals.

18. The liquid crystal display (LCD) device loading unit of claim 16, wherein the position of the first, second, and third power input terminals on the panel jig corresponds to the position of the gate, data, and common pads on the LCD device.

19. The liquid crystal display (LCD) device loading unit of claim 17, wherein an OFF-state stress is applied simultaneously to a plurality of LCD panels loaded into panel jigs.

20. The liquid crystal display (LCD) device loading unit of claim 16, wherein said LCD device includes a backlight unit; and

said panel jig includes a backlight power terminal for supplying power to the
backlight unit of said LCD device.